



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

## NOTICE OF ACCEPTANCE (NOA)

**GFRC 360, LLC; dba GFRC Cladding**  
118 North Shiloh Road  
Garland, Texas 75042

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER- Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

### DESCRIPTION: "Class 2" Glass Fiber Reinforced Concrete Wall Panels

**APPROVAL DOCUMENT:** Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., revision C1 dated February 03, 2016, signed and sealed by Warren W. Schaefer, P.E., bearing Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by Miami-Dade County Product Control Section.

### MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

**LABELING:** Each panel shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises & renews** NOA #14-0423.08 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



*Helmy A. Makar*  
06/16/2016

NOA No. 16-0209.12  
Expiration Date: 05/31/2021  
Approval Date: 06/16/2016  
Page 1

**GFRC 360, LLC; dba GFRC Cladding**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #01-0216.05**

**A. DRAWINGS**

1. *Drawing No. 1037, sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated January 29, 2001, signed and sealed by Warren W. Schaefer, P.E. on May 1, 2001.*

**B. TESTS**

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test on GFRC Glass Fiber Reinforced Concrete Wall Panel, prepared by Hurricane Test Laboratory, Inc., Report No. 0250-1203-00, dated February 14, 2001, signed and sealed by Vinu J. Abraham, P.E.*

**C. CALCULATIONS**

1. *Calculations, dated February 2, 2001, 3 pages, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E. on February 5, 2001.*

**D. MATERIAL CERTIFICATIONS**

1. *Daracem ML 500 Superplasticizer ASTM Type A and Type F by Grace Construction Products.*
2. *Technical data and specifications.*

**2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #05-0901.03**

**A. DRAWINGS**

1. *Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated 01/29/2001, signed and sealed by Warren W. Schaefer, P.E. on 08/17/2005.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**


1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. STATEMENTS**

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E., stating that he is still in the engineering business, dated January 13, 2006.*

  
\_\_\_\_\_  
Helmy A. Makar, P.E., M.S.  
Product Control Section Supervisor  
NOA No. 16-0209.12  
Expiration Date: 05/31/2021  
Approval Date: 06/16/2016

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-0513.03**

**A. DRAWINGS**

1. *Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels ", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., revision B1 dated 05/11/2011, signed and sealed by Warren W. Schaefer, P.E.*

**B. TESTS**

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test on GFRC Glass Fiber Reinforced Concrete Wall Panel, prepared by Hurricane Test Laboratory, Inc., Report No. T250-0401-11, dated May 09, 2011, signed and sealed by Vinu J. Abraham, P.E.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building and Neighborhood Compliance department.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. STATEMENTS**

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., dated May 11, 2011, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2007 Edition.*

**4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-1110.07**

**A. DRAWINGS**

1. *Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels ", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., revision B1 dated 05/11/11, signed & sealed by Warren W. Schaefer, P.E., 02/06/12.*

**B. TESTS**


1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Department of Permitting, Environment, and Regulatory Affairs (PERA).*

  
Henry A. Makar, P.E., M.S.  
Product Control Section Supervisor  
NOA No. 16-0209.12  
Expiration Date: 05/31/2021  
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**GFRC 360, LLC; dba GFRC Cladding**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. STATEMENTS**

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., dated 11/04/11, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2007 & 2010 Editions.*

**5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 14-0423.08**

**A. DRAWINGS**

1. *None.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. STATEMENTS**

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., dated 04/14/14, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2014 Edition.*

**6. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., revision C1 dated February 03, 2016, signed and sealed by Warren W. Schaefer, P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

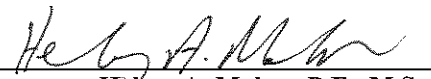
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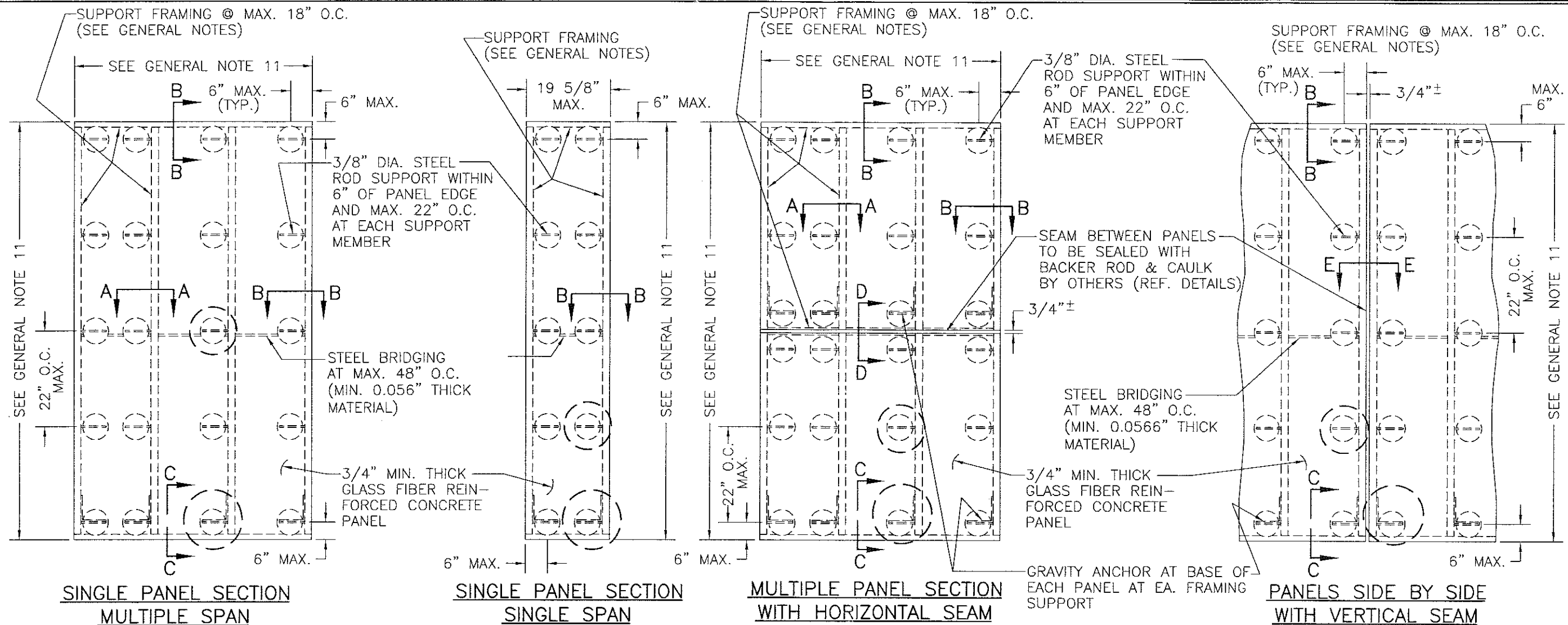
**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

  
Helmy A. Makar, P.E., M.S.  
Product Control Section Supervisor  
NOA No. 16-0209.12  
Expiration Date: 05/31/2021  
Approval Date: 06/16/2016



#### GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE PANELS.
- THIS PANEL SYSTEM HAS BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- THE PANELS AND THEIR 3/8\"
- ALL SUPPORT FRAMING SHALL BE MIN. 4\"
- MAXIMUM ALLOWABLE DEFLECTION FOR THIS ASSEMBLY SHALL BE L/360.
- DETAILS ON SHEETS 2 THROUGH 4 ARE TYPICAL AND SHOW INTENT TO PREVENT WATER INFILTRATION INTO AND BEHIND THE SYSTEM.
- THIS SYSTEM IS A LARGE MISSILE IMPACT APPROVED SYSTEM.
- THIS WALL PANEL SYSTEM SHALL NOT BE CONSIDERED TO OR BE USED FOR TRANSFER OF DIAPHRAM ACTION OF WALL TO STRUCTURE.
- PANEL SIZES ARE LIMITED BY SHIPPING & HANDLING REQUIREMENTS (TYPICALLY LIMITED TO 12 FT. IN ONE DIRECTION) AND/OR JOB REQUIREMENTS ONLY AND ARE NOT LIMITED TO THE 55 5/8\"

PRODUCT REVISED  
as complying with the Florida  
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Expiration Date 05/31/2021  
By *Heba Al-Mabrouk*  
Miami Design Product Control

#### PANEL SPECIFICATIONS

**BRIEF DESCRIPTION:**  
GLASS FIBER REINFORCED CONCRETE (GFR)C) PANEL WITH MIN. THICKNESS = 3/4\"

MIX DESIGN	
MATERIAL	AMOUNT
TYPE I PORTLAND CEMENT	94 LBS
SAND (1:1 RATIO TO CEMENT)	94 LBS
WATER	26 LBS
COPOLYMER DISPERSION COMPOUND BY BALL CONSULTING, LTD.	11 LBS
ALKALI RESISTANT GLASS FIBER BY NIPPON ELECTRIC GLASS AMERICA, INC.	4.5% BY WEIGHT MIN. OF TOTAL MIX
WR GRACE DURACEM ML500 PLASTICIZER	0-8 OZ. AS REQ'D TO OBTAIN CORRECT SLUMP TO PUMP

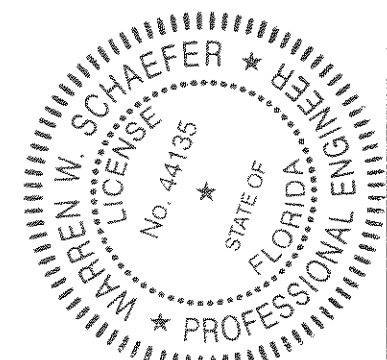
THE CEMENT AND THE SAND AGGREGATE ARE COMBINED WITH WATER AND THE THEROMPLASTIC COPOLYMER DISPERSION AGENT IN A HIGH SHEAR MIXER. AFTER MIXING, SLURRY IS PUMPED THROUGH A HOSE TO A CONCENTRIC SPRAY GUN, WHERE THE CHOPPED GLASS FIBER IS ADDED & SPRAYED ONTO THE MOLD.

#### ALLOWABLE DESIGN PRESSURE

POSITIVE	NEGATIVE
105 PSF	150 PSF

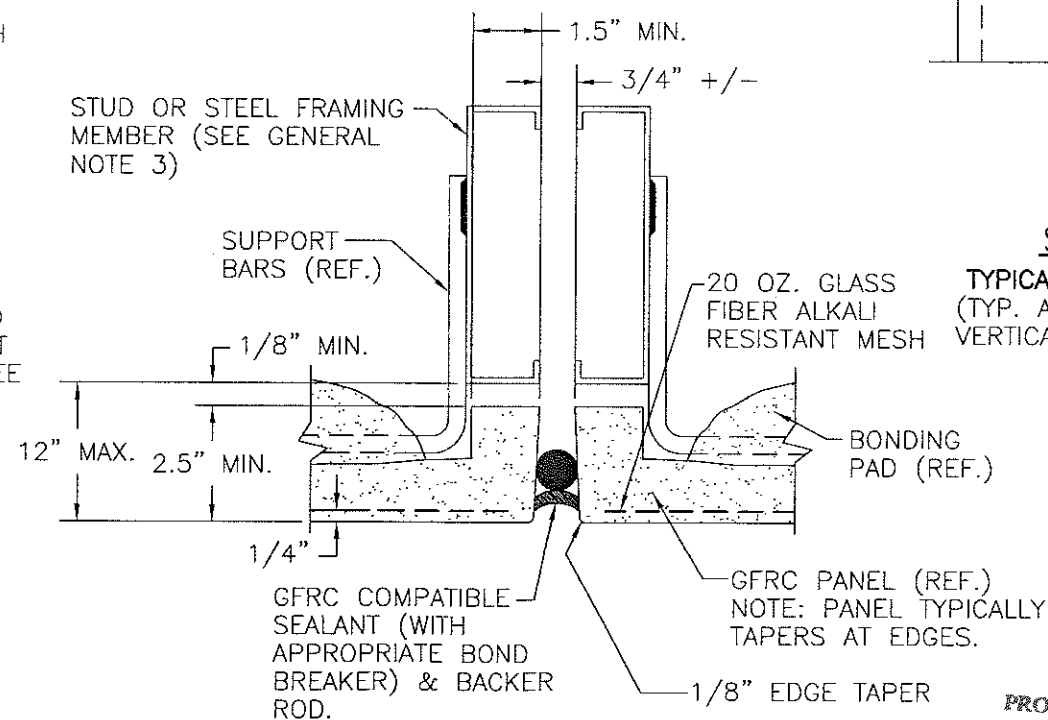
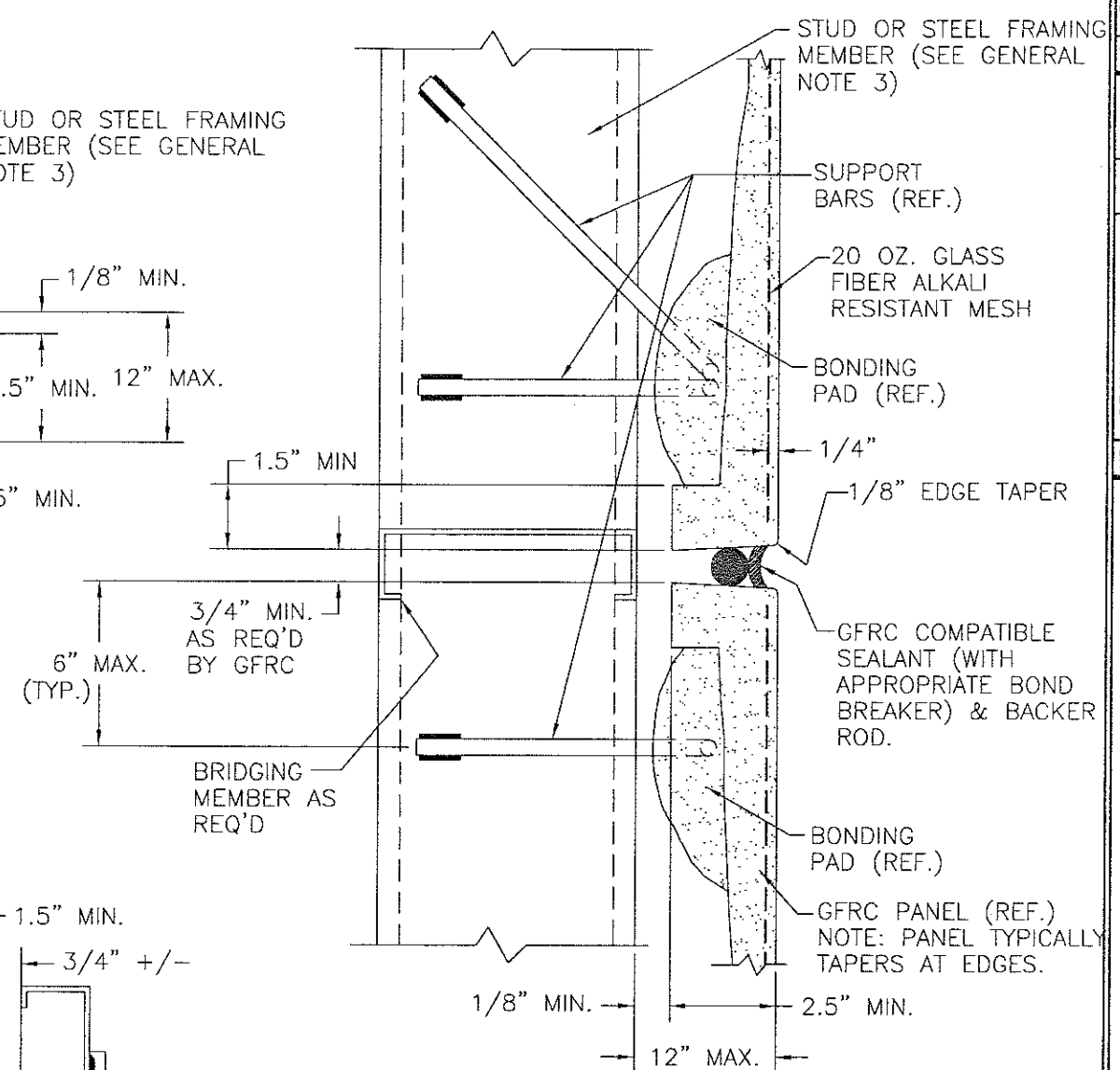
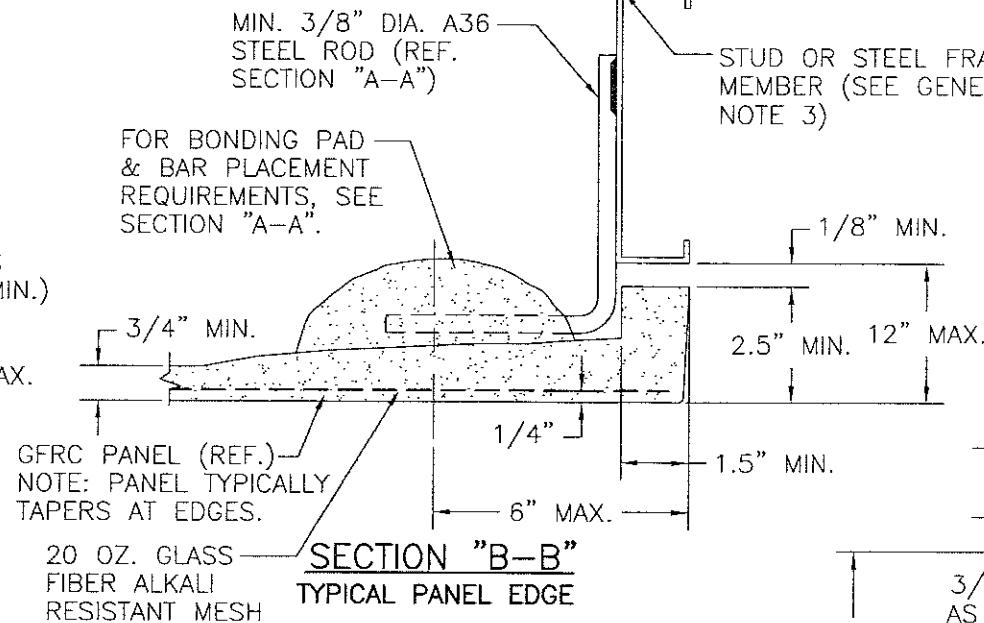
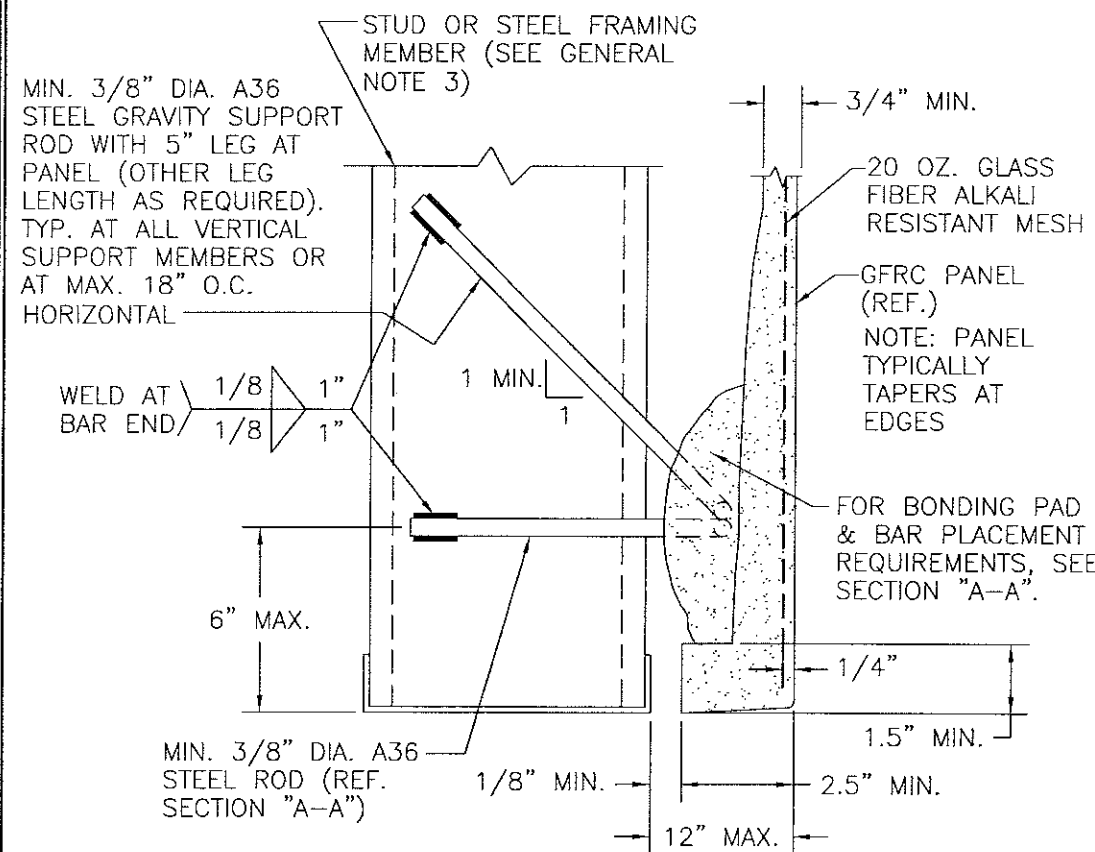
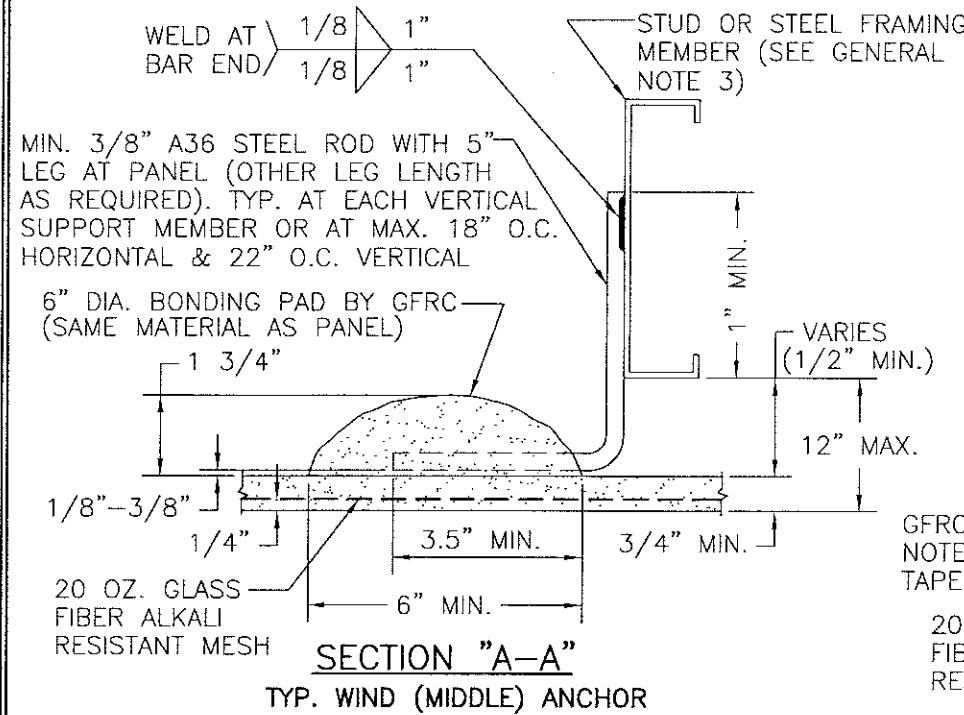
LARGE MISSILE IMPACT APPROVED

#### EXTERIOR ELEVATIONS

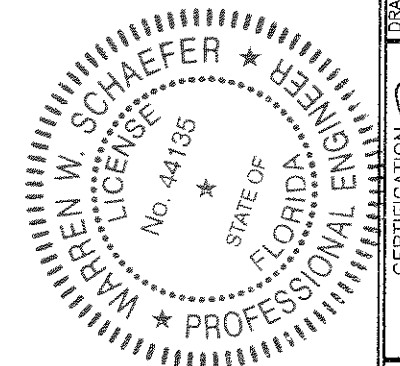


THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

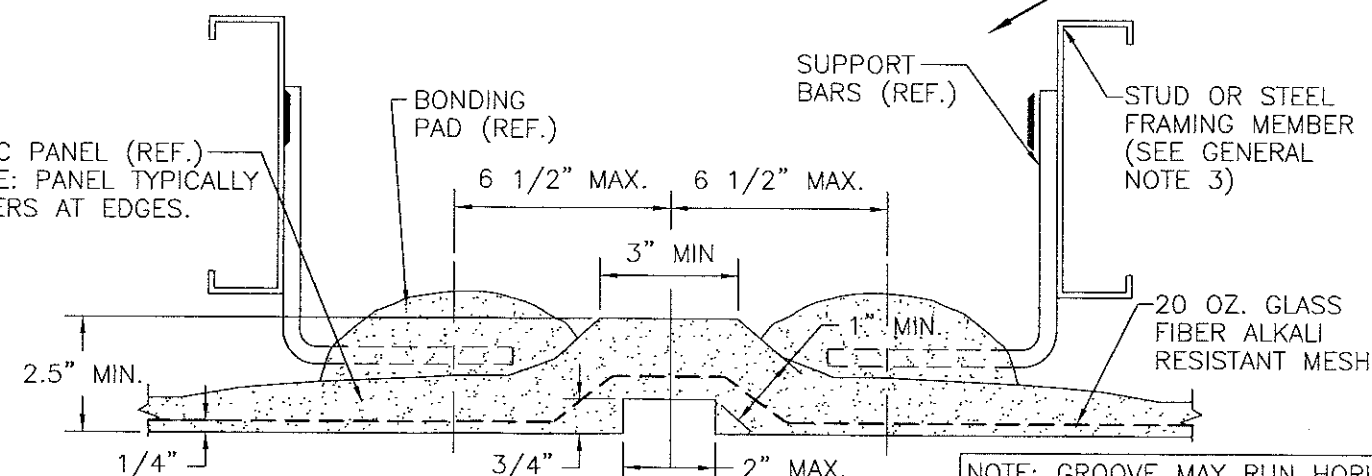
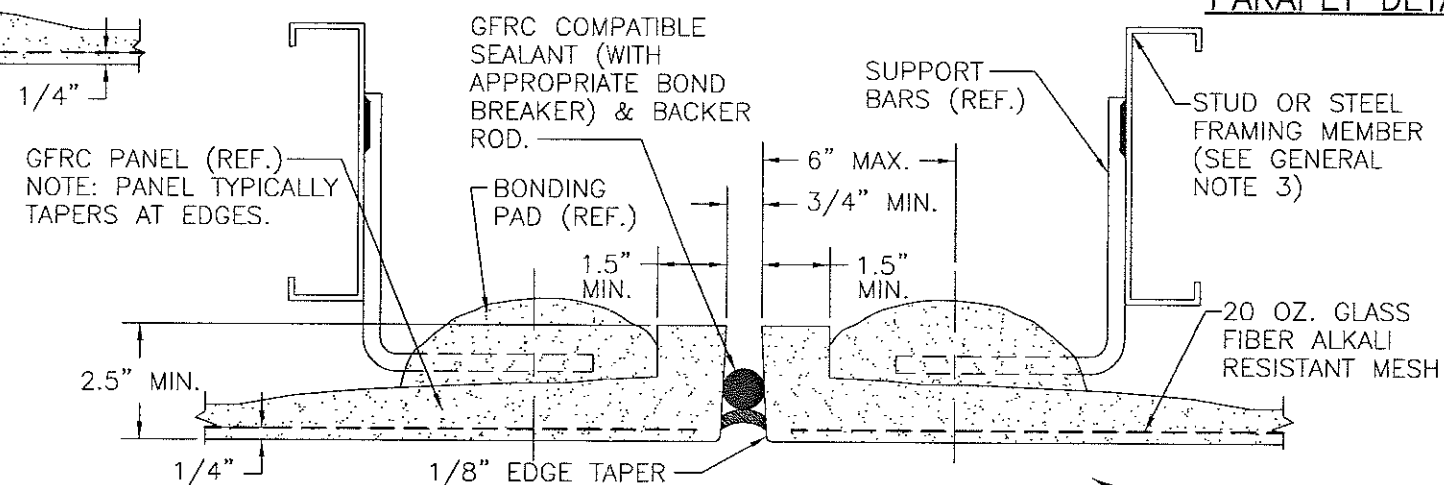
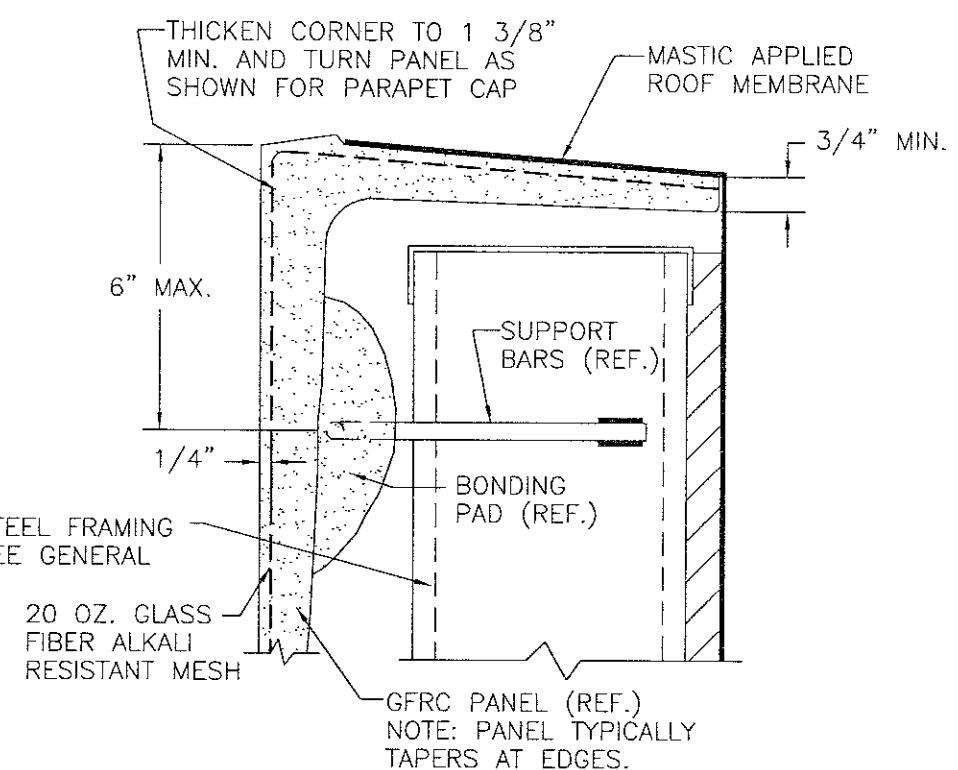
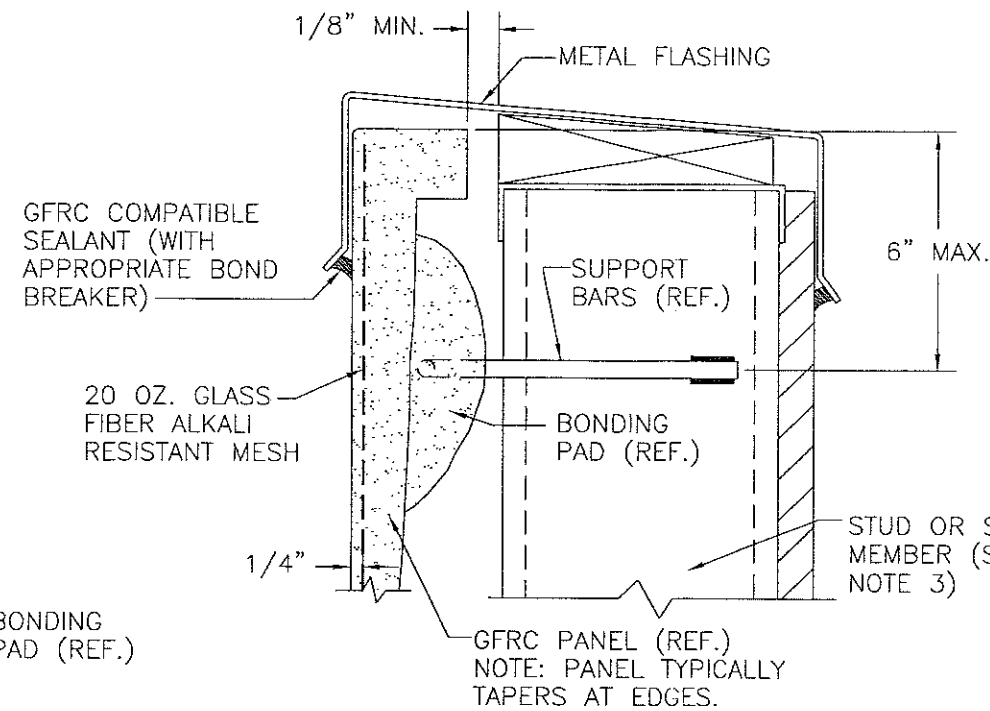
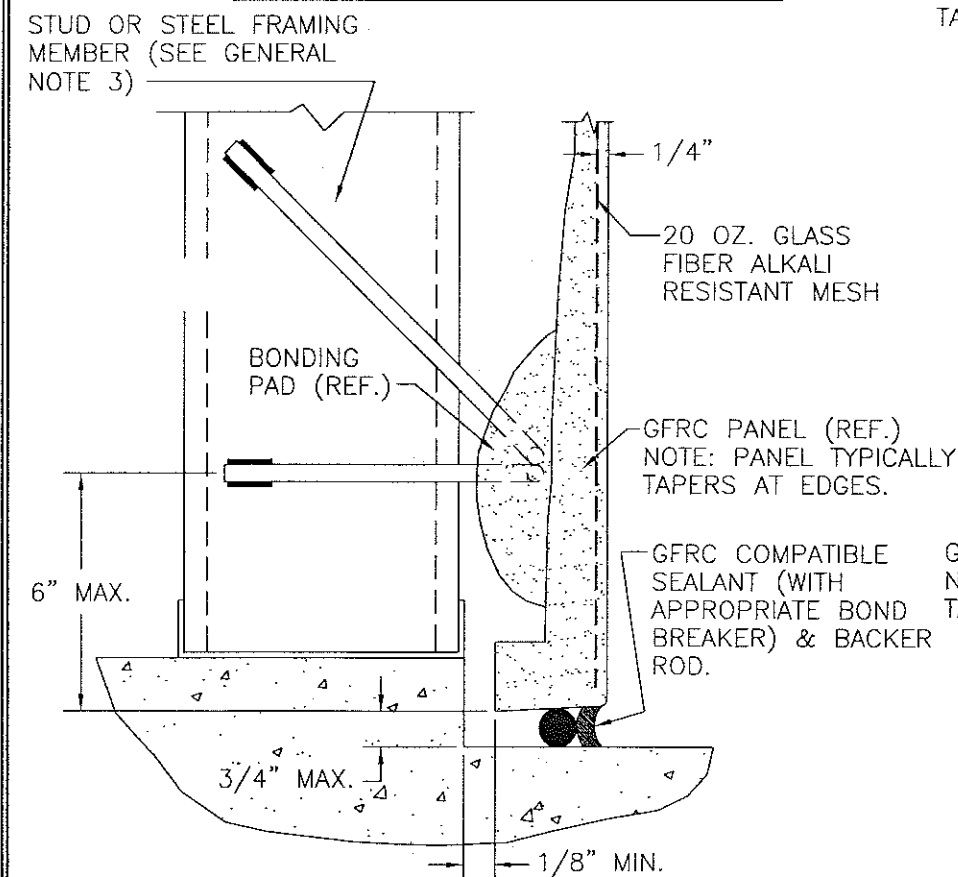
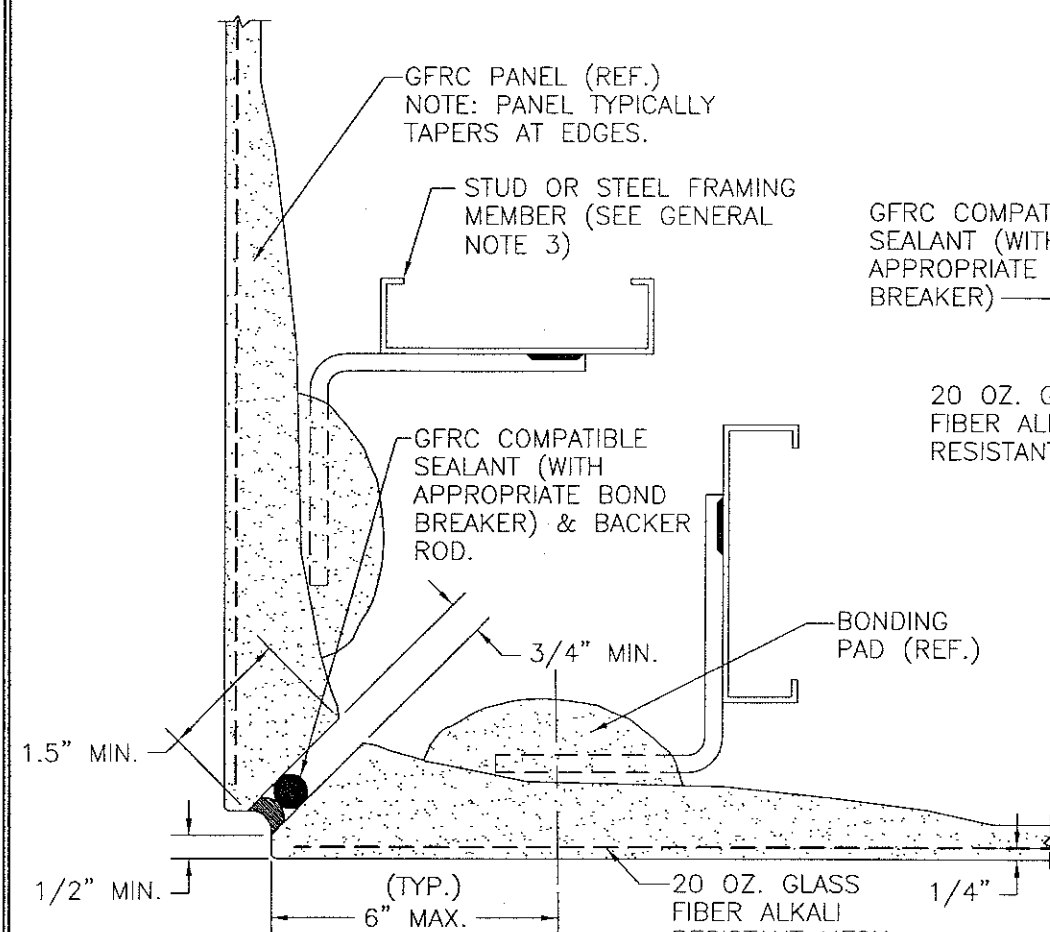
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PLOT: 1=24		DATE: 01/28/01	
NO.	REVISION DESCRIPTION	DATE	BY
A1	UPDATE GENERAL NOTES TO 2004 CODE COMPLIANT	08/16/05	TAL
B1	UPDATE TO CURRENT STANDARDS	05/11/11	WRM
C1	MANUFACTURER NAME CHANGE	02/03/18	WWS
<b>DRAWING TITLE</b> CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS MANUFACTURER GFR 360, LLC; dba GFR CLADDING 118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000 CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424 <b>CERTIFICATION</b> FEB 03 2016 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
<b>DRAWING NO.</b> 1037		<b>REV.</b> C	
<b>SHEET NO.</b> 1 OF 4			



PRODUCT REVISED  
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Building Code  
Acceptance No. 16-0209.12  
Expiration Date 05/31/2021  
By: [Signature]  
Manufacturer Product Control

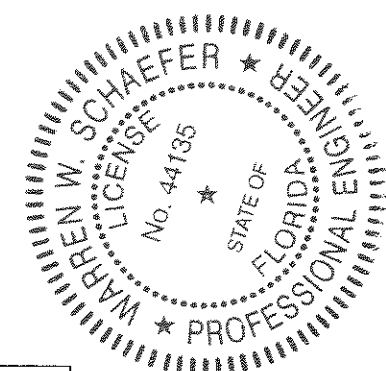


DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
DATE: 01/29/01	DATE: 01/29/01
NO.	REVISION DESCRIPTION
1	4
CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS	
CONSULTANTS	MANUFACTURER
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	GFRC 360, LLC; dba GFRC CLADDING
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000
CERTIFICATION	FEB 03 2016
DRAWING NO.	REV.
1037	C
SHEET NO.	2 OF 4



PRODUCT REVISED  
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Acceptance No. 16-0209.12  
Expiration Date 05/31/2021  
By H. G. A. [Signature]  
Miami Dept. of Product Control

THESE DETAILS SHOWS A VERTICAL JOINT.  
HORIZONTAL JOINT SIMILAR EXCEPT JOINT  
RUNS PERPENDICULAR TO STUDS.

[illegible]

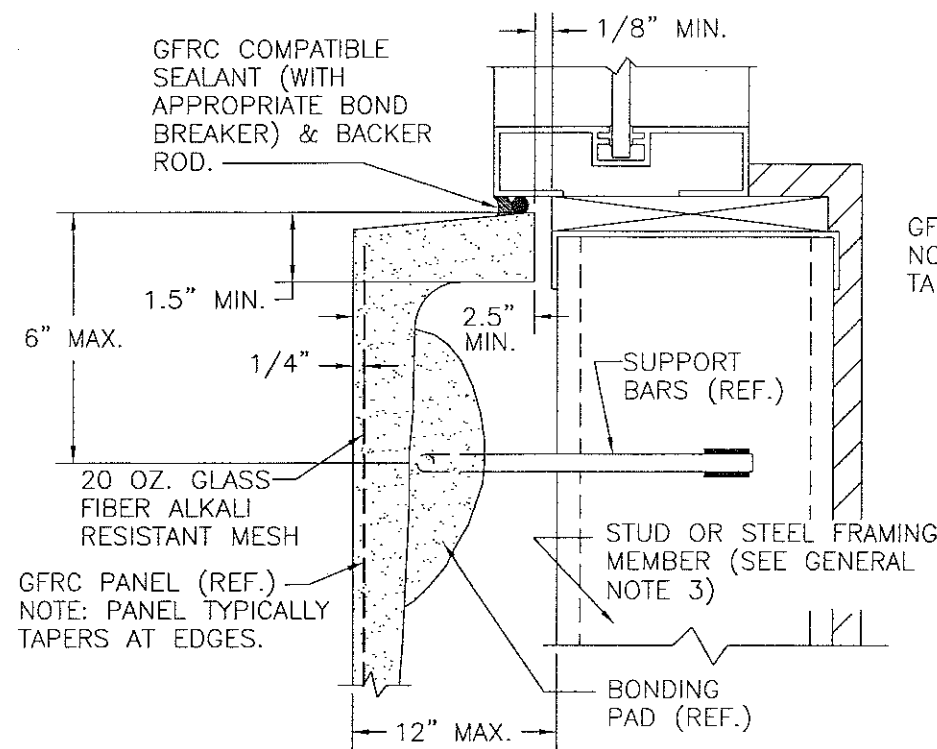
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CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS

**GFRC 360, LLC; dba GFRC CLADDING**  
118 NORTH SHILOH ROAD  
GARLAND, TEXAS 75042  
972-494-9000

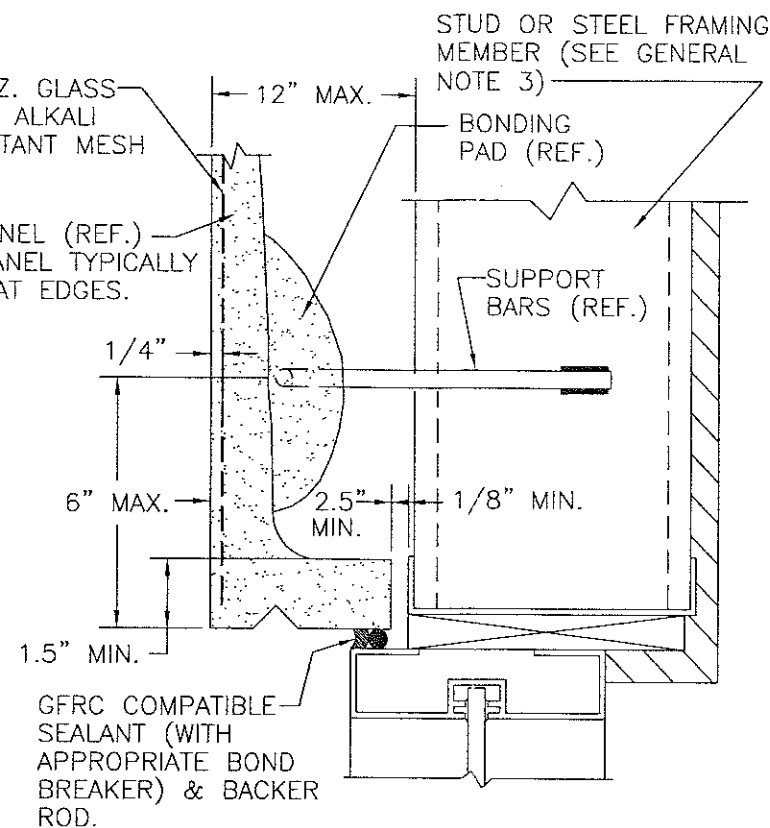
**CONSULTANTS**  
**W. W. SCHAEFER ENGINEERING**  
**& CONSULTING, P.A. (CA 6809)**  
7480 150TH COURT NORTH  
PALM BEACH GARDENS, FL 33418  
PHONE: 561-744-3424

WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

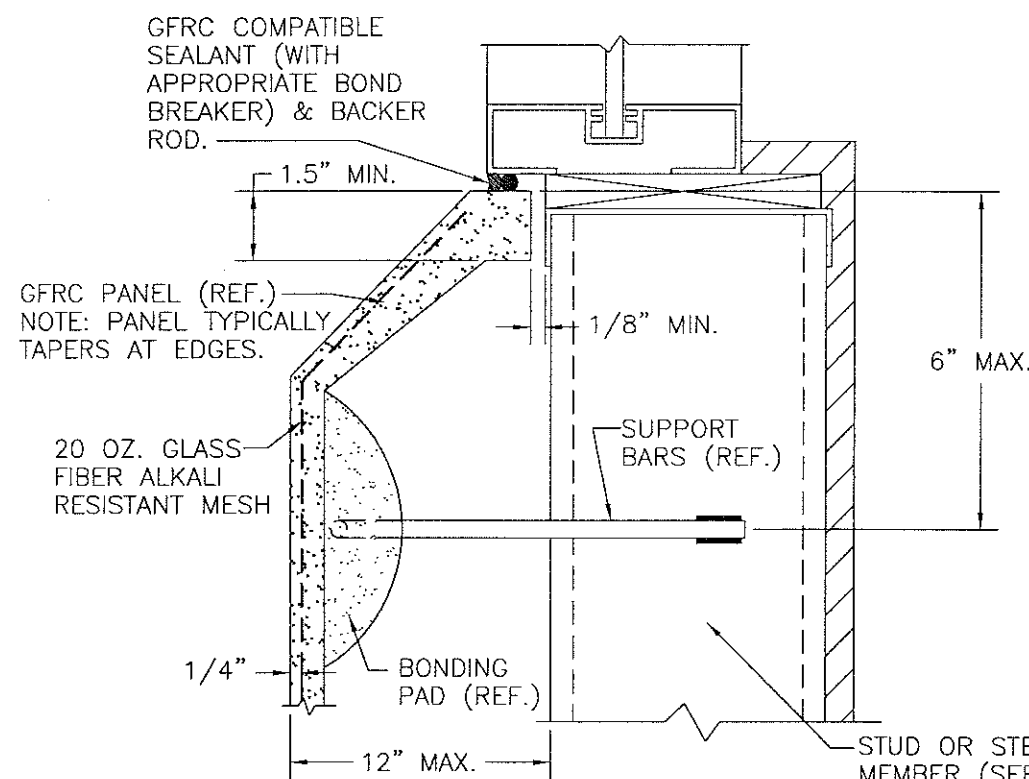
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SHEET NO. OF 4	



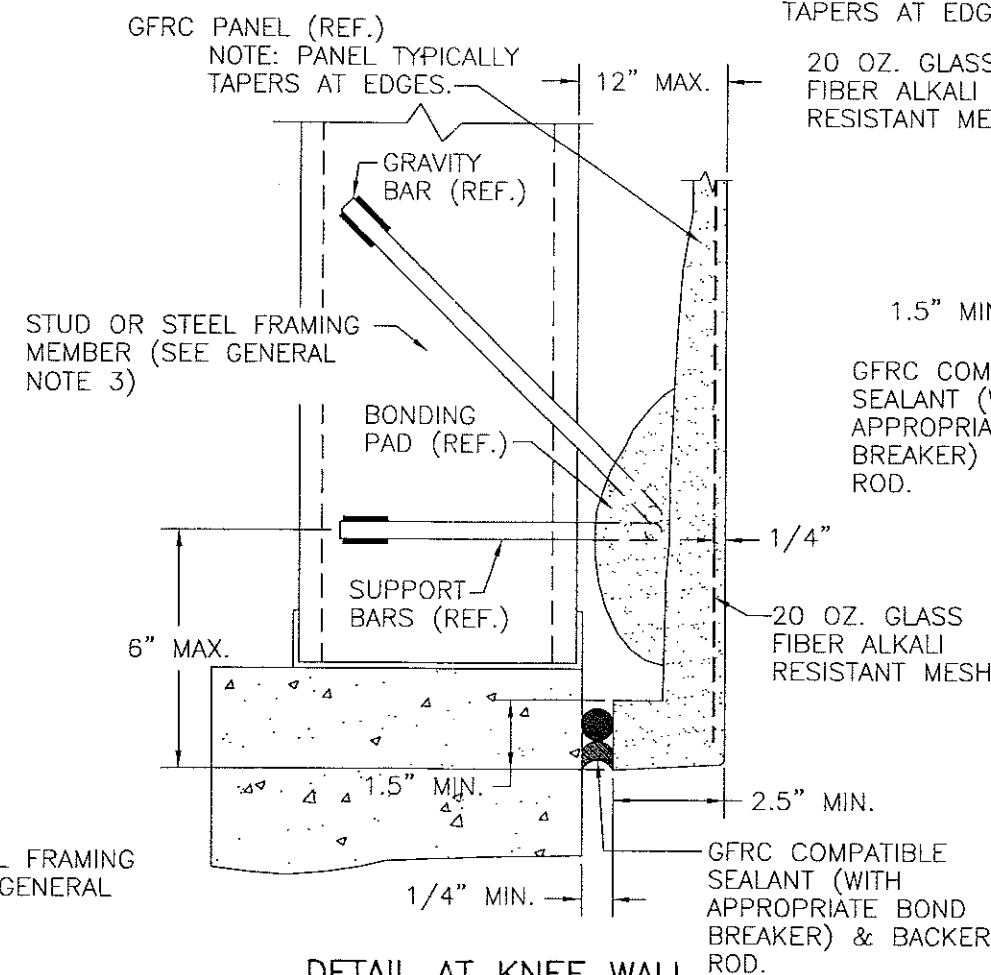
**TYP. WINDOW SILL DETAIL**  
SIMILAR FOR SIDE JAMBS



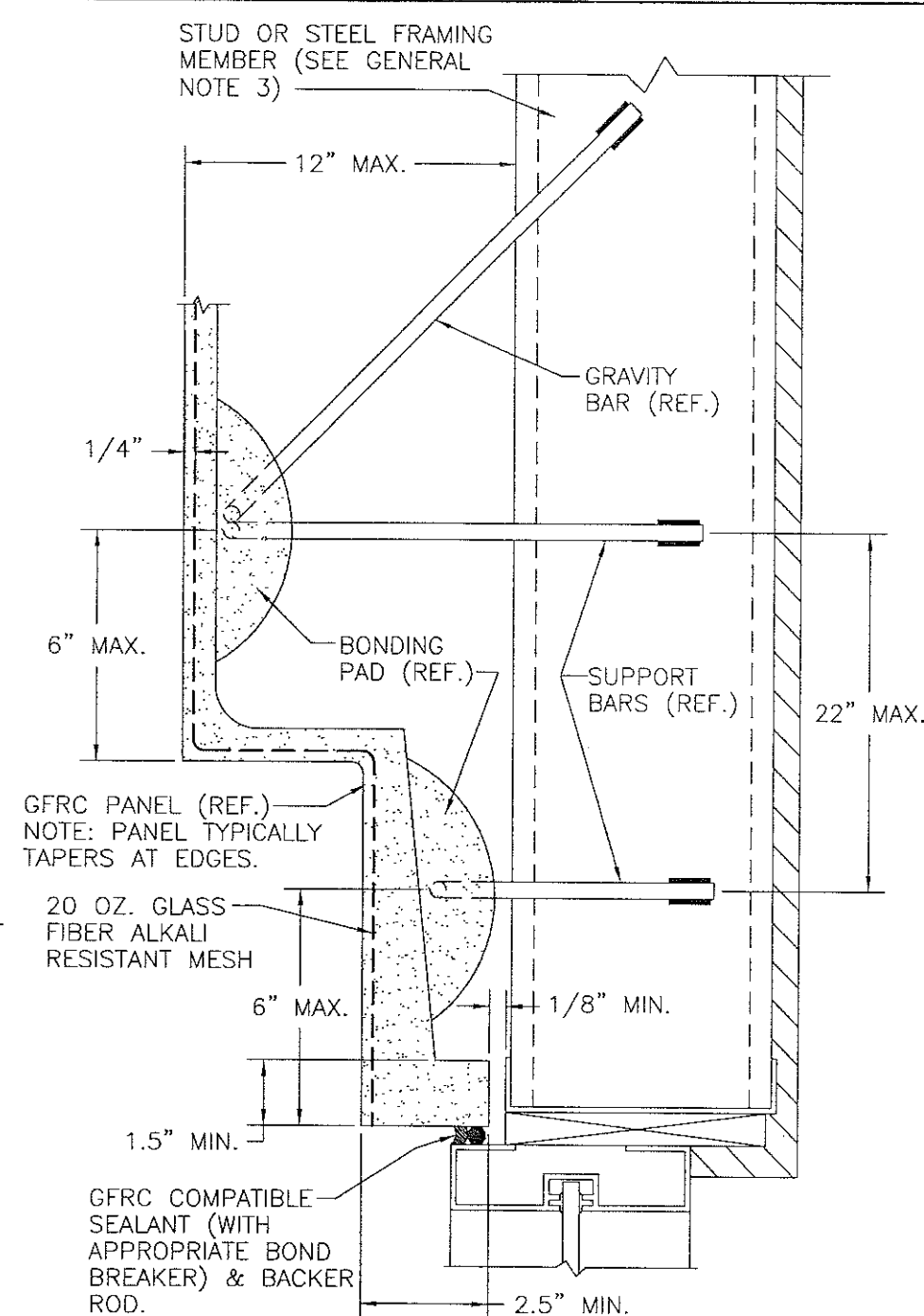
**TYP. WINDOW/DOOR HEAD DETAIL**



**MISCELLANEOUS DETAIL**

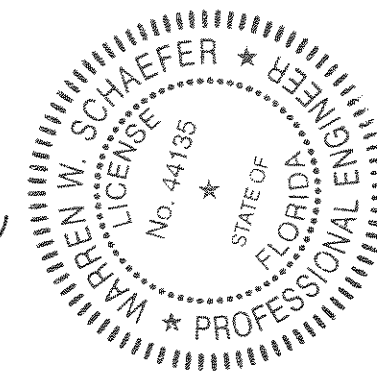


**DETAIL AT KNEE WALL**



**MISCELLANEOUS DETAIL**

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 16-0209.12  
Expiration Date 05/31/2021  
By *[Signature]*  
Miami Design Product Control



DRAWING TITLE	CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS		DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
			PLOT: 1=4		DATE: 01/29/01	
			DATE			
			BY			
CONSULTANTS			REVISION DESCRIPTION			
			NO.			
MANUFACTURER						
DRAWING NO.						
SHEET NO.						

FEB 03 2016

WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO. 1037  
REV. C  
SHEET NO. 4 OF 4